

Abstract

A endovascular fastener and grafting apparatus preferably made from a shape memory alloy is provided which can access internal tissue or other synthetic material by catheter delivery through an endovascular pathway. After the fastener is deployed through layers of tissue or other material, it assumes a shape that automatically applies to the layers of tissue or other material an appropriate hemostatic compression which is relatively independent of tissue or material thickness. The fastener is a suitable replacement for conventional nonbio-absorbable sutures and staples in certain clinical applications. The shape, method of deployment and low force requirements make the disclosed apparatus suitable for standard endovascular surgical procedures where access to the deployment site is limited. A method for deploying the endovascular fastener and grafting apparatus is also provided.